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- Vadivelu N, Kai AM, Kodumudi V, Sramcik J, Kaye AD. The opioid crisis: a comprehensive overview. *Curr Pain Headache Rep.* 2018; 22(3):1–6. doi:10.1007/s11916-018-0670-z.
- Rudd RA, Aleshire N, Zibbell JE, Gladden RM. Increases in drug and opioid overdose deaths—United States, 2000–2014. MMWR Morb Mortal Wkly Rep. 2016;64(50-51):1378–1382. doi:10.15585/ mmwr.mm6450a3.
- Wakeman SE, Green TC, Rich J. An overdose surge will compound the COVID-19 pandemic if urgent action is not taken. *Nat Med*. 2020;26(6):819–820. doi:10.1038/s41591-020-0898-0.
- Friedman J, Mann NC, Hansen H, et al. Racial/ethnic, social, and geographic trends in overdose-associated cardiac arrests observed by US emergency medical services during the COVID-19 pandemic. *JAMA Psychiatry*. 2021;78(8):886–895. doi:10.1001/jamapsychiatry. 2021.0967.
- Slavova S, Rock P, Bush HM, Quesinberry D, Walsh SL. Signal of increased opioid overdose during COVID-19 from emergency medical services data. *Drug Alcohol Depend*. 2020;214:108176. doi:10.1016/j. drugalcdep.2020.108176.
- Glober N, Mohler G, Huynh P, et al. Impact of COVID-19 pandemic on drug overdoses in Indianapolis. J Urban Health. 2020;97(6): 802–807. doi:10.1007/s11524-020-00484-0.
- Holland KM, Jones C, Vivolo-Kantor AM, et al. Trends in US emergency department visits for mental health, overdose, and violence outcomes before and during the COVID-19 pandemic. *JAMA Psychiatry*. 2021;78(4):372–379. doi:10.1001/jamapsychiatry.2020. 4402.
- Soares IW, Melnick ER, Nath B, et al. Emergency department visits for nonfatal opioid overdose during the COVID-19 pandemic across six US health care systems. *Ann Emerg Med.* 2022;79(2):158–167. doi:10.1016/j.annemergmed.2021.03.013.
- Rodda LN, West KL, LeSaint KT. Opioid overdose–related emergency department visits and accidental deaths during the COVID-19 pandemic. *J Urban Health*. 2020;97(6):808–813. doi:10.1007/s11524-020-00486-y.
- Shreffler J, Shoff H, Thomas JJ, Huecker M. Brief report: the impact of COVID-19 on emergency department overdose diagnoses and county overdose deaths. *Am J Addict*. 2021;30(4):330–333. doi:10. 1111/ajad.13148.
- Rosenbaum J, Lucas N, Zandrow G, et al. Impact of a shelter-in-place order during the COVID-19 pandemic on the incidence of opioid overdoses. Am J Emerg Med. 2021;41:51–54. doi:10.1016/j.ajem. 2020.12.047.
- Cartus AR, Li Y, Macmadu A, et al. Forecasted and observed drug overdose deaths in the US during the COVID-19 pandemic in 2020. *JAMA Netw Open.* 2022;5(3):e223418. doi:10.1001/jamanetwor-kopen.2022.3418.
- 13. Macmadu A, Batthala S, Gabel AM, et al. Comparison of characteristics of deaths from drug overdose before vs during the COVID-19 pandemic in Rhode island. *JAMA Netw Open.* 2021;4(9):e2125538. doi:10.1001/jamanetworkopen.2021.25538.

- 14. Appa A, Rodda LN, Cawley C, et al. Drug overdose deaths before and after shelter-in-place orders during the COVID-19 pandemic in San Francisco. *JAMA Netw Open.* 2021;4(5):e2110452. doi:10.1001/jamanetworkopen.2021.10452.
- Currie JM, Schnell MK, Schwandt H, Zhang J. Trends in drug overdose mortality in Ohio during the first 7 months of the COVID-19 pandemic. *JAMA Netw Open*. 2021;4(4):e217112. doi:10.1001/jamanetworkopen.2021.7112.
- Mason M, Welch SB, Arunkumar P, Post LA, Feinglass JM. Notes from the field: Opioid overdose deaths before, during, and after an 11-week COVID-19 stay-at-home order—Cook County, Illinois, January 1, 2018–October 6, 2020. MMWR Morb Mortal Wkly Rep. 2021;70(10):362–363. doi:10.15585/mmwr.mm7010a3.
- Nguyen T, Buxton JA. Pathways between COVID-19 public health responses and increasing overdose risks: A rapid review and conceptual framework. *Int J Drug Policy*. 2021;93:103236. doi:10.1016/j.drugpo. 2021.103236.

MILTON BLAKE, SUNSCREEN PIONEER



he article by Drissi et al¹ provides a welcome description of key figures and milestones in the history of sunscreen development. However, as a medical practitioner from Australia, I feel obliged to point out an important oversight in the paper. Milton Blake, an Australian chemist, has been credited by several

sources^{2,3} as one of the pioneers of sunscreen development in the early 20th century, yet he is not mentioned in the article by Drissi and colleagues. It is therefore worth briefly describing for *Proceedings* readers Blake's contribution to sunscreen development, which Blake achieved with limited resources.

Blake graduated from the University of Adelaide, South Australia, in 1923 with a bachelor of science degree. In the late 1920s, spurred by a German article he had read regarding an organic compound that had the potential to absorb ultraviolet rays, Blake conducted experiments in the Adelaide boarding house where he was residing to incorporate the compound (phenyl salicylate) into a topical cream formulation.⁵ Blake's "laboratory" was his bedroom, and his equipment, comprising "a kerosene room heater, saucepans for containers and a pair of old-fashioned hand scales,"5 could be described as rudimentary at best. After several unsuccessful trials, Blake eventually produced a "sunburn preventative cream." Professor Kerr Grant, an eminent physicist at Blake's alma mater, then conducted further tests on the cream and confirmed that it provided ultraviolet shielding. In the early 1930s, Blake started to produce large quantities of his sunscreen for commercial purposes, and in 1932 he established the company Hamilton Laboratories, which

proceeded to make a range of sun protection and skin care products over the ensuing decades. The name "Hamilton" was derived from Blake's preferred signature line—"H. A. Milton"—in official documents. Blake's innovative efforts comfortably stand alongside those of other pioneers of sunscreen development, such as Eugene Schueler, Franz Greiter, and Benjamin Green, who are mentioned in the paper by Drissi et al.

Blake was undoubtedly the major Australian figure in the early years (1920s and 1930s) of sunscreen development, but it is worth noting that he was not the only Australian researcher in the field in that era. In the 1930s, an unnamed dermatologist affiliated with the Queensland Radium Institute in the Australian state of Queensland made a 10% dispersion of phenyl salicylate in paraffin for use as a sunscreen in the institute's cancer patients. Apart from the omission of Blake, the article by Drissi et al provides an excellent overview of the history of sunscreen, with due recognition of sunscreen pioneers.

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- Drissi M, Carr E, Housewright C. Sunscreen: a brief walk through history. *Proc (Bayl Univ Med Cent)*. 2022;35(1):121–123. doi:10. 1080/08998280.2021.1966602.
- Rigel DS, Weiss RA, Lim H, Dover JS. *Photoaging*. Boca Raton, FL: CRC Press; 2004.
- Glaser KS, Tomecki KJ. Sunscreens in the United States: current status and future outlook. In: Reichrath J, ed. Sunlight, Vitamin D and Skin Cancer. New York: Springer; 2020:355–379.
- University of Adelaide. Graduates of the University of Adelaide. Adelaide: The Advertiser Publishing Office; 1950:76.
- Hamilton Laboratories. History. https://webarchive.nla.gov.au/awa/ 20070831103818/http://hamiltonlabs.chimo.com.au/site/page.cfm?u= 10. Accessed December 14, 2022.
- Hamilton. History of Hamilton. https://www.hamiltonsunandskin. com.au/history-of-hamilton. Accessed December 14, 2022.
- Groves GA. The sunscreen industry in Australia: past, present and future. In: Lowe NJ, ed. Sunscreens: Development, Evaluation and Regulatory Aspects. New York: Marcel Dekker; 1997:227–240.